LISTING OF THE CLAIMS

Claims 1-14, 16-51 were pending. Please cancel claims 12, 24-26, 32-34, 39-41, and please amend claims 1, 9, 13, 18, 21, 23, 31, 38, 45 and 51 without acquiescence in the Office Action's basis for rejections or prejudice to pursue in a related application. No new matter has been added. A complete listing of the pending claims is provided below and supersedes all previous claim lists.

1.   (Currently Amended) A method for managing information <u>produced by an application </u>to be accessed by multiple consumers, said information comprising one or more information records, said information records to be accessed by said multiple consumers in a specified order, said information record comprising data <u>produced by the application </u>to be accessed by a consumer, said method comprising:

said method comprising:

providing said data of an information record to a consumer of the multiple consumers;

updating, by using a processor, a history table, said history table comprising a history record for said consumer for said information record, said history record comprising a message state field for indicating whether said data of said information record have been provided to said consumer, said updating comprising setting said message state field in a history record corresponding to said consumer to indicate said consumer accessed said data, wherein the multiple consumers access the same information records in the same prescribed order and the consumer does not have to wait for any others to finish a transaction before the consumer [[can]] begins the transaction on the same information records;

<u>associating a work list table with said history table, said work list table comprising one or more work entries;</u>

<u>batching two or more work entries in said work list table;</u>

reading one or more history records of said history table, said one or more history records determined by said two or more work entries;

deleting the one or more information records; and

storing the data in a volatile or non-volatile computer-readable medium or displaying the data on a display device.

2.   (Previously Presented) The method for managing information of claim 1, in which each said information record further comprises a message identifier value that identifies the data of said information record, and each said history record further comprises a message id field that identifies data in an information record.

3.   (Original) The method for managing information of claim 2, in which each said history record further comprises a consumer id field that identifies a consumer of said multiple consumers that is to access data in an information record, said data identified by said message id field in said history record, said consumer id field of said history record identifying said history record as corresponding to said consumer.

4.   (Original) The method for managing information of claim 3, in which said updating comprises setting said message state field in the history record with a message id field that identifies said data that said consumer is provided access to and with a consumer id field that identifies said consumer.

5.   (Previously Presented) The method for managing information of claim 1, in which prefix

index key compression is used to store only one instance of a message identifier value that

identifies the data of an information record in said history table for each history record for said

information record.

6.   (Previously Presented) The method for managing information of claim 1, further

comprising:

        storing data to be accessed by a consumer in an information record;

        creating a history record for each consumer that is to access said data; and

        setting said message state field in each said history record to indicate said data has not

been accessed.

7.   (Previously Presented) The method for managing information of claim 1, further

comprising

        identifying the data of an information record that a consumer is to be provided access to

by order data in a read-order table, said order data indicating a relative order that data in said

information records is to be accessed by said multiple consumers.

8.   (Original) The method for managing information of claim 1, further comprising:

        reading one or more history records of said history table, said one or more history records

comprising a history table read; and

        deleting an information record if all the message state fields in all of the history records

of said history table read indicate that said data in said information record has been accessed.

9.   (Currently Amendment) The method for managing information of claim 1, ~~further comprising associating a work list table with said history table, said work list table comprising one or more work entries, each~~ <u>wherein</u> said work entry comprising an identification of data in [[an]] <u>the</u> information record.

10.   (Original) The method for managing information of claim 9, further comprising adding a work entry to said work list table, said work entry comprising an identification of said data said consumer is provided access to.

11.   (Original) The method for managing information of claim 9, further comprising:

accessing a work entry in said work list table;

reading one or more history records of said history table, said one or more history records comprising a history table read, said one or more history records comprising said history table read determined by said work entry; and

deleting an information record if all the message state fields in all of the history records of said history table read indicate that said data in said information record has been accessed.

12.   (Canceled)

13.   (Currently Amended) A system for the delivery of information <u>produced by an application</u> to multiple consumers<u>, said information comprising data produced by the application to be accessed by a consumer</u>, said system comprising:

5

a processor for executing instructions;

an information queue comprising one or more information queue records, said information queue record comprising information to be accessed by one or more consumers; [[and]]

a table separated from said information queue, said table comprising one or more table records, said table record comprising an identification of said information in an information queue record, said table record further comprising a consumer identification field comprising an identification of one of said one or more consumers, and a message state field for indicating whether one of the one or more information queue records has been accessed by one of the one or more consumers, wherein the multiple consumers access the same information queue records in the same prescribed order and the one or more consumers do not have to wait for any others to finish a transaction before the one or more consumers [[can]] begin the transaction on the same information queue records;

a work list table being associated with said table, said work list table comprising one or more work entries, wherein the processor is programmed for:

batching two or more work entries in said work list table;

reading one or more table records of said table, said one or more table records determined by said two or more work entries;

deleting the one or more information records; and

a volatile or non-volatile computer-readable medium for storing the information or a display device displaying the information.

14.   (Original) The system for the delivery of information to multiple consumers of claim 13, in which each said information queue record further comprises said identification of said information of said information queue record.

15.   (Canceled)

16.   (Original) The system for the delivery of information to multiple consumers of claim 13, further comprising a read-order table, said read-order table comprising order data indicating the order that information in said information queue is to be delivered to a consumer.

17.   (Original) The system for the delivery of information to multiple consumers of claim 16, in which said read-order table comprises one or more records, each said record of said read-order table comprising an identification field that identifies information in an information queue record, each said record of said read-order table further comprising an enqueue time field that comprises said order data.

18.   (Currently Amended) The system for the delivery of information to multiple consumers of claim 13, ~~further comprising a work list table, said work list table comprising one or more work list entries, each~~ <u>wherein</u> said work list entry comprising an identification of information in an information queue record.

19.   (Original) The system for the delivery of information to multiple consumers of claim 18, in which each said work list entry is a record.

20.   (Original) The system for the delivery of information to multiple consumers of claim 18,

in which said work list table comprises one or more work records and each said work list entry is

a field in a work record.

21.   (Currently Amended) A system for the delivery of messages <u>produced by an application</u>

to multiple consumers<u>, said messages comprising data produced by the application to be</u>

<u>accessed by a consumer</u>, ~~said method comprising,~~ said system comprising:

        a processor for executing instructions;

        a message queue comprising one or more message queue records, said one or more

message queue records comprising a message and a message identification;

        a history table separated from said message queue comprising

one or more history records, [[of]] said one or more history records comprising

a message identification, a consumer identification and a message state identification, said

message state identification indicating whether one of the one or more message queue records

has been accessed; and

        a work list table separated from said message queue and said history table comprising

one or more work list entries, [[each]] said work list entry comprising a message identification,

wherein the multiple consumers access the same message queue records in the same prescribed

order and a consumer does not have to wait for any others to finish a transaction before the

consumer [[can]] begin<u>s</u> the transaction on the same message queue records<u>, wherein the</u>

<u>processor is programmed for:</u>

        <u>batching two or more work entries in said work list table;</u>

reading one or more history records of said history table, said one or more history records determined by said two or more work entries;

deleting the one or more information records; and

a volatile or non-volatile computer-readable medium storing the message or a display device for displaying the message.

22.   (Original) The system for the delivery of messages to multiple consumers of claim 21, further comprising a read-order table comprising one or more read-order records, each said read-order record comprising a message identification and order data, said order data indicating the relative order that the message of said message queue that is identified by the message identification of said read-order record is to be delivered to a consumer.

23.   (Currently Amended) A method for multiple consumers to access information produced by an application in a non first-in-first-out, prescribed order, said information comprising one or more pieces of information, a first piece of information produced by the application stored in a first location to be accessed by a consumer, said method comprising:

providing access to said first piece of information to a first consumer of said multiple consumers;

indicating in a second location in a history table that said first consumer has accessed said first piece of information, said history table having a first message state field for indicating whether said first consumer has accessed said first piece of information;

providing access to said first piece of information to a second consumer of said multiple consumers; [[and]]

indicating, by using a processor, in a third location in said history table that said second consumer has accessed said first piece of information, said history table having a second message state field for indicating whether said second consumer has accessed said first piece of information, wherein the multiple consumers access the same information records in the same prescribed order and the first consumer does not have to wait for any others to finish a transaction before the consumer [[can]] begins the transaction on the same information records;

associating a work list table with said history table, said work list table comprising one or more work entries;

reading one or more history records of said history table, said one or more history records determined by said two or more work entries;

deleting said entry comprising said first piece of information from said queue of information after said first consumer and said second consumer have accessed said first piece of information, in which said first location comprises an information entry in a queue of information, in which said queue of information comprises one or more information entries, and each said information entry comprises a piece of information to be accessed by one or more of said multiple consumers, each said information entry further comprising an identification of said piece of information in said information entry; and

storing the first piece of information in a volatile or non-volatile computer-readable medium or displaying the first piece of information on a display device.

24.   (Canceled)

25.   (Canceled)

26.   (Canceled)

27.   (Previously Presented)   The system for delivery of information to multiple consumers of claim 13, in which for each of said one or more consumers, said table comprises a separate table record for each piece of information to be accessed by said consumer.

28.   (Previously Presented) The method for multiple consumers to access information of claim 23, in which said history table comprises an identification of said first piece of information and an identification of said first consumer.

29.   (Previously Presented) The method for multiple consumers to access information of claim 28, in which said third location comprises a history entry in said history table, said history entry comprising an identification of said first piece of information and an identification of said second consumer.

30.   (Previously Presented) The method for multiple consumers to access information of claim 23, further comprising:

indicating in a fourth location an order in which said one or more pieces of information is to be accessed by said multiple consumers.

31.   (Currently Amended) A computer program product that includes a volatile or non-volatile computer readable medium, the computer readable medium having stored thereon a

sequence of instructions which, when executed by a processor, causes the processor to execute a

process for multiple consumers to access information produced by an application in a non first-in

first-out, prescribed order, said information comprising one or more pieces of information, a first

piece of information produced by the application stored in a first location to be accessed by a

consumer once, said process comprising:

indent: providing access to said first piece of information to a first consumer of said multiple

consumers;

indent: indicating in a second location in a history table that said first consumer has accessed said

first piece of information, said history table having a first message state field for indicating

whether said first consumer has accessed said first piece of information;

indent: providing access to said first piece of information to a second consumer of said multiple

consumers; [[and]]

indent: indicating in a third location in said history table that said second consumer has accessed

said first piece of information, said history table having a second message state field for

indicating whether said second consumer has accessed said first piece of information, wherein

the multiple consumers access the same information records in the same prescribed order and the

first consumer does not have to wait for any others to finish a transaction before the first

consumer [[can]] begins the transaction on the same information records;

indent: associating a work list table with said history table, said work list table comprising one or

more work entries;

indent: reading one or more history records of said history table, said one or more history records

determined by said two or more work entries;

deleting said entry comprising said first piece of information from said queue of information after said first consumer and said second consumer have accessed said first piece of information, in which said first location comprises an information entry in a queue of information, in which said queue of information comprises one or more information entries, and at least one of said one or more information entries comprises a piece of information to be accessed by one or more of said multiple consumers, said at least one of said one or more information entries further comprising an identification of said piece of information in said information entry; and

storing the first piece of information or displaying the first piece of information on a display device.

32.   (Canceled)

33.   (Canceled)

34.   (Canceled)

35.   (Previously Presented) The computer program product of claim 31, in which said history table comprises an identification of said first piece of information and an identification of said first consumer.

36.   (Previously Presented) The computer program product of claim 35, in which said third

location comprises a history entry in said history table, said history entry comprising an

identification of said first piece of information and an identification of said second consumer.

37.   (Previously Presented) The computer program product of claim 31, further comprising:

indicating in a fourth location an order in which said one or more pieces of information is to be

accessed by said multiple consumers.

38.   (Currently Amended) A system for multiple consumers to access information produced

by an application in a non first-in first-out, prescribed order, said information comprising one or

more pieces of information, a first piece of information produced by the application stored in a

first location to be accessed by a consumer, said system comprising:

        a processor programmed for:

        providing access to said first piece of information to a first consumer of said multiple

consumers;

        indicating in a second location in a history table that said first consumer has accessed

first piece of information, said history table having a first message state field for indicating

whether said first consumer has accessed said first piece of information;

        providing access to said first piece of information to a second consumer of said multiple

consumers; [[and]]

        indicating in a third location in said history table that said second consumer has accessed

said first piece of information, said history table having a second message state field for

indicating whether said second consumer has accessed said first piece of information, wherein

the multiple consumers access the same information records in the same prescribed order and the

first consumer does not have to wait for any others to finish a transaction before the first

consumer [[can]] begins the transaction on the same information records;

associating a work list table with said history table, said work list table comprising one or

more work entries;

reading one or more history records of said history table, said one or more history records

determined by said two or more work entries;

deleting said entry comprising said first piece of information from said queue of

information after said first consumer and said second consumer have accessed said first piece of

information, in which said first location comprises an information entry in a queue of

information, in which said queue of information comprises one or more information entries, said

information entry comprises a piece of information to be accessed by one or more of said

multiple consumers, said information entry further comprising an identification of said piece of

information in said information entry; and

a volatile or non-volatile computer-readable medium for storing the first piece of

information or a display device for displaying the first piece of information.

39.   (Canceled)

40.   (Canceled)

41.   (Canceled)

42.   (Previously Presented) The system of claim 38, in which history table comprises an identification of said first piece of information and an identification of said first consumer.

43.   (Previously Presented) The system of claim 42, in which said third location comprises a history entry in said history table, said history entry comprising an identification of said first piece of information and an identification of said second consumer.

44.   (Previously Presented) The system of claim 38, wherein the processor is further adapted for indicating in a fourth location an order in which said one or more pieces of information is to be accessed by said multiple consumers.

45.   (Currently Amended) A computer program product that includes a computer readable medium, the computer readable medium having stored thereon a sequence of instructions which, when executed by a processor, causes the processor to execute a process for managing information produced by an application to be accessed by multiple consumers, said information comprising one or more information records, said information records to be accessed by said multiple consumers in a specified order, [[each]] said information record produced by the application comprising data to be accessed by a consumer, said process comprising:

providing said data of an information record to a consumer of the multiple consumers;

updating a history table, said history table comprising a history record for said consumer for said information record, said history record comprising a message state field for indicating whether said data of said information record have been provided to said consumer, said updating comprising setting said message state field in a history record corresponding to said consumer to

indicate said consumer accessed said data, wherein the multiple consumers access the same information records in the same prescribed order and the consumer does not have to wait for any others to finish a transaction before the consumer [[can]] begins the transaction on the same information records;

associating a work list table with said history table, said work list table comprising one or more work entries;

batching two or more work entries in said work list table;

reading one or more history records of said history table, said one or more history records determined by said two or more work entries;

deleting the one or more information records; and

storing the data in a volatile or non-volatile computer-readable medium or displaying the data on a display device.

46. (Previously Presented) The computer program product of claim 45, in which each said information record further comprises a message identifier value that identifies the data of said information record, and each said history record further comprises a message id field that identifies data in an information record.

47. (Previously Presented) The computer program product of claim 45, in which prefix index key compression is used to store only one instance of a message identifier value that identifies the data of an information record in said history table for each history record for said information record.

48.   (Previously Presented) The computer program product of claim 45, the process further

comprising:

        storing data to be accessed by a consumer in an information record;

        creating a history record for each consumer that is to access said data; and

        setting said message state field in each said history record to indicate said data has not

been accessed.

49.   (Previously Presented) The computer program product of claim 45, the process further

comprising identifying the data of an information record that a consumer is to be provided access

to by order data in a read-order table, said order data indicating a relative order that data in said

information records is to be accessed by said multiple consumers.

50.   (Previously Presented) The computer program product of claim 45, the process further

comprising:

        reading one or more history records of said history table, said one or more history records

comprising a history table read; and

        deleting an information record if all the message state fields in all of the history records

of said history table read indicate that said data in said information record has been accessed.

51.   (Currently Amended) The computer program product of claim 45, ~~the process further~~

~~comprising associating a work list table with said history table, said work list table comprising~~

~~one or more work entries, each~~ <u>wherein</u> said work entry comprising an identification of data in

an information record.